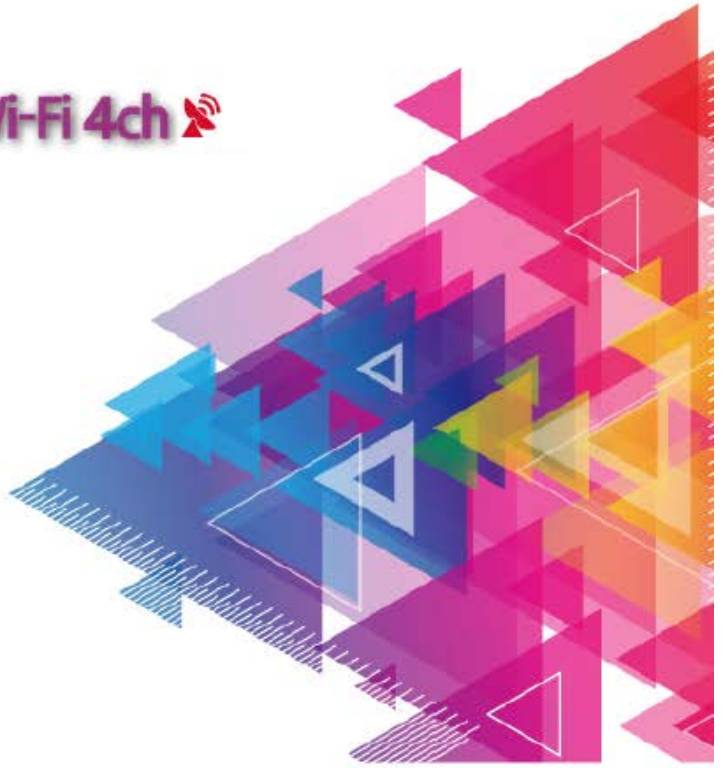
Urive i-Quad

User Manual

Wi-Fi 4ch



MISP-REM-MDU-MD-4000P

- Product name: Urive I-Quad(MD-4000P)
- Production/sals : Midong e&t co., ltd.

This system is for assisting people in driving safely.
Users should use the product for its original purposes properly, considering that they will be responsible for all the accidents that might occur.

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0. Before using Urive Shotgun

- All the contents in this manual is protected according to the copyright law.
- The products and services described in this manual belong the trademark of the right holder of this product.
- All the rights to the program used in the product belong to Midong E&T Co., Ltd. and are protected according to the copyright law. Any act of Illegal copying, modification, production, and distribution without prior written consent from the company will be subject to criminal punishment, such as but not limited to, imprisonment of up to five (5) years or penalty of up to KRW 50 million according to the software protection law.
- The manual is made based on current conditions and may have technical and editorial errors and omissions.
- Some change can be made in the product for the purpose of improving the performance of URIVE I-Quad without notifying customers in advance.
- The images used in the manual may look different from the actual screens depending on the conditions of printing.
- It is recommended that users should read the manual carefully before using the product in order to apply it in a proper and safe manner.

The user manual can be changed without a prior notice to users for the purpose of improving the performance of the functions of the product.

1. Overview

The product is for storing the front and rear video and audio information coming from the front and rear cameras. It is a product to assist people in driving safely by recording the front and rear videos as well as the indoor audio information when an accident or shock occurs and also by providing relevant circumstantial reference data.

- Install and use the product properly according to the user manual.
- The company will not be held responsible for failures or accidents that might occur due to improper use, installation, or modification.
  Users need to understand that the product's specific PC viewer program can run on a PC in which **Window XP/Vista/Windows 7** is installed. For the program to operate smoothly, it is recommended to use a PC with at least CPU- Intel Core2 Quad Q6600 @ 2.40GHz, RAM – 2GB.
- The product and the user manual can be changed without a prior notification for the purpose of improving them.
- The company holds the rights to all the software and hardware of the product. Any act of illegal copying, processing, or distribution of them will be subject to payment of compensation for loss in civil procedure and, in addition, can be subject to criminal punishment according to the intellectual property protection law.
- Refrain from manipulating the black box while driving for the purpose of safe driving.

This product is for assisting people in driving safely.

Users are required to use the product properly considering that they will be responsible for al the accidents if they should occur.

2. Precautions before using the product

◆ Scope of warranty and responsibilities

- This product is for assisting people in driving safely. The company will not be responsible for the loss that could occur due to failures, data loss, or while using the product itself.

- This product is an ancillary device designed for recording and storing external videos. Some functions may not be supported depending on the driving conditions and the conditions of a vehicle itself. When it comes to the level of support for performance that is to be provided through the updating of firmware for improving quality and securing stability, it may vary depending on types of products. **Depending on situations, recording may not take place. Considering that, users need to use the product only for getting information for checking driving-related videos. Recording may not take place also depending on the conditions of the SD card.**

- This product is designed for recording the video related to an accident involving a user's vehicle. However, it is not guaranteed that a whole length of a video related to an accident is to be recorded. In case of an accident in which a minor shock occurs, the detection sensor will not be activated, and, consequently, the video related to the event may not be recorded.

◆ Precautions for using the memory card

- Check the data once a week at least for confirming that the product works normally.

- Format the micro SD memory card twice a month at least for using the product stably.

- Recommended to use a micro SD card that is exclusively designed for the product.

Generally, the memory card has a lifetime during which it can be used (6 months are guaranteed). If it has been used for a long period of time, it would be impossible to store new data. In that case, users need to buy a new memory card for using the product. It should be understood in advance that the company will not be held responsible, at all, for data loss due to long-time use.
Removing the memory card or turning its power off while the recording is in progress may cause stored data at the last stage to be deleted. The company will not be held responsible for it at all. It is recommended to copy and store important data into other recording units.

3. Precautions when using the product

Safety precautions must be followed to prevent possible accidents and risks by using the product in a safe and proper manner. The company will not take any responsibilities for the problems that could occur when instructions in using the product is violated.

Warning: Serious injuries or death could be caused if violating the instructions.

Do not place the product in heating equipment (such as heaters and microwave ovens) for heating it up when it gets wet.
Otherwise, explosion, transformation, or failure could be caused.
In that case, the warranty service will not be provided .

Do not use chemical detergents (such as benzene, thinner, or alcohol) for cleaning the product.
Otherwise, fires could be caused.

Do not disassemble or apply shock on it arbitrarily.
The warranty service will not be provided if the user has caused the product to be damaged by disassembling it or applying shock onto it.

Refrain from installing or manipulating the product while driving.
Operating the system while driving could cause accidents. When needed to operate, it is required to park the vehicle at a safe place first before manipulating it.

Precaution. Minor injuries or insignificant damage to the product could be caused if violating the instructions

Do not use the product for a long period of time while connected to the electrical power of the vehicle directly.
Otherwise, the battery could be discharged.

Be careful about a reflective device, such as a navigation device or a hi-pass terminal.
The screen will be reflected on the windshield, causing the input of video to be interfered with. In that case, the quality of video may be degraded..

Apply the dual-side tape firmly when installing the product.
Its position can be changed when used for a long period of time or due to the vibration from the vehicle, possibly causing the performance to be degraded.

Take precautions when installing the external camera.
When installing it on the rear window, the quality of video will vary depending on the density of the tinted film.

Keep the windshield clean in front of the front camera lens always.
If the video that is improperly recorded due to impurities is fed, the recording of the video while driving will not take place normally.
Users should pay attention to it.

Recording may not take place normally when using a non-certified micro SD card.
The memory card must be inserted or removed while the power cable is disconnected.

Back up the stored file periodically.
When the memory usage exceeds a certain level, files will be deleted starting with the oldest ones while new ones are saved. Considering that, it is required to back up the stored files periodically to prevent necessary ones from being removed.

Keep the memory card separately when a car accident occurs or when the card is checked for any damage .
When the black box is used continuously and the memory usage level exceeds a certain level, files will be deleted starting with the oldest ones in individual folders while new ones are stored, which could cause necessary files to be deleted.

4. Features (1)

◆ **High-quality recording of videos through clear screen and optimal viewing angle**

In order to clearly record the videos including those taken at a accident site or taken while parked, the product provides not only clear resolution both for day and night, but also an optimal viewing angle.

◆ **WiFi function**

The product supports 4ch live images and recording images on a smart phone (Android OS) using the specific mobile application. (Merely, a distance between transmission and reception could be different by the circumstance and communication condition.)

◆ **Continuous recording**

The product supports a continuous recording function that will record videos taken continuously while driving.

◆ **Event (shock) recording**

When an external shock occurs in the continuous recording mode, it will be detected by a three-axis acceleration sensor, allowing the video, taken for 30 seconds totally from the 10 seconds before the incidence to the 20 seconds after it, to be stored in the event folder.

◆**Recording while parked, which is like the function of a CCTV for protecting a user's car**

The product supports a function of recording while parked, making it possible to record the videos of motions detected or damage done to a car that could take place often due to shock (to be released later).

◆ **Memory automanagement**

The product supports a memory automanagement, which will delete files starting with the oldest ones stored in individual folders, in order to keep recording the recent driving videos even when the memory card runs short of storage space.

◆ **Backup function**

The product supports a backup function so that the last file is saved even if the power is shut out.

4. Features (2)

◆ **Digital zooming**

While the video is played back through the specific PC viewer, they can be enlarged using the digital zooming function to look at the situation in more details.

◆ **Checking the recorded data through the specific PC viewer**

The videos, stored by the black box, can be played back through the specific PC viewer to check data while videos are being played back through four channels at the same time.

◆ **Checking the videos in real time**

When the system is installed and operated, the navigation screen will help check the videos in real time through the video out function. (Merely, the pin arrangement between the AV-IN or CAM socket of the navigation unit and the video cable should be matched.)

◆**A voltage cutoff unit, designed for preventing the discharging of a battery is embedded and the support for setting the cutoff voltage function and a timer function is available.**

The product has an embedded power cutoff unit, which will help prevent the battery inside the main body from being discharged when the continuous power is used. In the parking mode, if the voltage reaches a certain level as set for the cutoff voltage, the black box will be turned off to prevent itself from causing the battery to be discharged. There are four stages in the cutoff voltage as well as another four stages for the timer. So users can select and combine two factors, each one from each category.

◆ **Saving the driving records**

Date/Time/Mileage for driving is recorded and it could trace the moving route through the specific viewer. Merely, the enclosed GPS module has to be installed for a location analysis.

5. Names of individual components and their functions

Power on/off

WiFi Dongle

SD card insertion part

LED for the mode of monitoring while driving (red)

LED for GPS (green)

LED for the mode of monitoring while parked (blue)

External camera socket

Video output socket

GPS socket

Power cable socket

6. Functions and buttons

Buttons	Operation	State	LED indications	Buzzer
-	Powering it on.	System preparation	The yellow and led LEDs are turned on. They will be turned off when the booting process ends.	Long beep
-	Powering if off.	The file that is being currently recorded ends safely after the power is turned off.	The yellow and red LEDs will stay turned on until they are turned off at the time of ending.	-
-	Entering the GPS data.	GPS operation	The green LED will blink.	-
WiFi	Formatting the micro SD card (only possible in the continuous recording mode).	Formatting the micro SD card after rebooting the system	The green, yellow and blue LEDs will blink alternately.	Long beep when starting, which will be repeated 3 times
	Audio recording ON/OFF	Audio recording ON	The red LED will blink slowly (every 1 second).	
		Audio recording OFF	The red LED will blink normally (every 3 seconds).	
-	Updating.	When successfully updating through the micro SD card.	The yellow and red LEDs will blink alternately. When the updating process ends, the system will be rebooted for operation.	Short beep, beep when starting Short beep, beep when ending
		When failing to update through the micro SD card.	The yellow and red LEDs will be turned off after waiting while staying turned on. The system will be rebooted for operation.	Short beep, beep, beep, beep when failing, which will be repeated 3 times

Buttons	Operation	State	LED indications	Buzzer
Continuous recording	The ACC power is turned on while the battery power is on.	One-minute video files will be stored in the * folder by DN_ file.	The red LED will blink every one second (The yellow LED is turned off).	Long beep when the saving process starts.
Event recordings	When shock is caused.	A video, taken from 10 seconds before the incident to the 20 seconds after it, will be stored in the * folder by DS_file at every 1 minute .	The red LED will blink fast every 0.1 second (the yellow LED is turned off)	Short beep, beep when the saving process starts. Short beep only when the process ends.
Recording of motions monitored while parked	The ACC power is turned off while the battery power is on. When some motion or shock happens.	A file, with the length of up to 30 seconds(10 seconds ahead the event and 20 seconds after the event), will be stored in the * folder. Motion while parked PMx_, Shock while parked PSx_.	Monitoring: The yellow LED will blink every 1 second. Recording: The yellow LED will blink fast every 0.1 second. (The red and green LED is turned off.)	Enters the parking mode: long beep

* Folder - Blackbox / year / month / date / time

Caution: 1. When the GPS connection (reception) occurs, the green LED will blink during the operation, instead of the red LED.

When the GPS disconnection occurs, the red LED will blink during the operation, instead of the green LED.

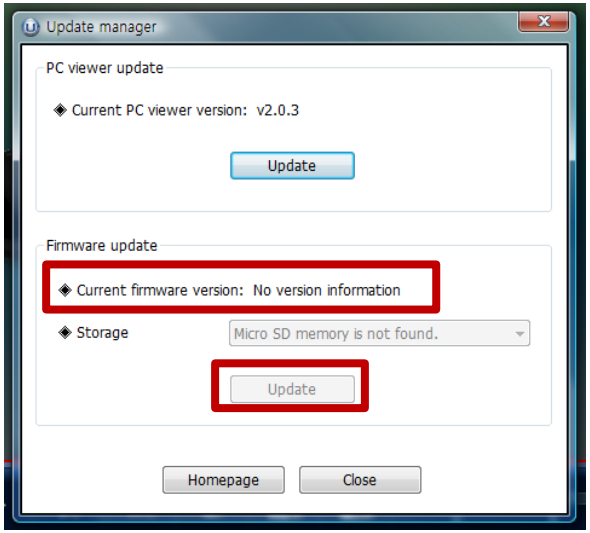
7. Updating (1)

[Automatic updating]

1. Through the specific viewer installed in a PC, the update file can be installed in the memory card automatically. After connecting the micro SD card to the PC, it is required to push the button on the top left side of the viewer' s main screen.
2. The current firmware version for the firmware updating can be checked through the 4ch blackbox update manager window.
3. It is required to check whether the firmware update file location is the drive where the memory card is connected.
4. Pushing the "Update" button will allow the upgrade file (main_xxxxx_x.xx.xxxx_xxxxxx.bin) to be copied into the memory card.

   Caution: If the Windows security warning message is displayed after the update button is pushed, the 'Unblock' button must be pushed. If the 'Continuous Block' is pushed, it will be impossible to perform updating afterwards due to security issues related to Windows. Users need to pay attention to it.

1



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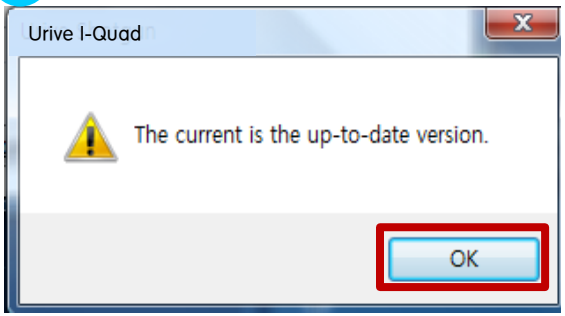

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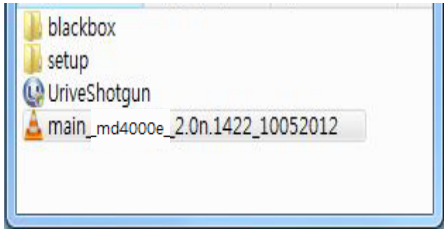


7. Updating (2)

[Automatic updating]

5. After the power for the black box is turned off, the micro SD card needs to be inserted into the main body of the black box.
6. Required to supply power to the black box.
7. Required to wait for about 10-20 seconds.
8. As the updating starts, the red and yellow LEDs will blink and short beeping sound will be generated.
9. When the updating process ends, the red and yellow LEDs will be turned off, and, at the same time, a short beep buzzer sound will be generated. After a short while, the black box will get started again.

[How to upgrade by WiFi]

1. Run the specific application on user's smart phone.
2. Touch a remote search menu to Home menu.
3. Touch a remote firmware upgrade menu after adding and checking the system.
4. Check if the upgrade is possible after checking the present and the latest firmware version.
5. Touch the remote firmware upgrade button if the upgrade is possible after checking.
6. As the updating starts, the red and yellow LEDs will blink and short beeping sound will be generated.
7. When the updating process ends, the red and yellow LEDs will be turned off, and, at the same time, a short beep buzzer sound will be generated. After a short while, the black box will get started again.

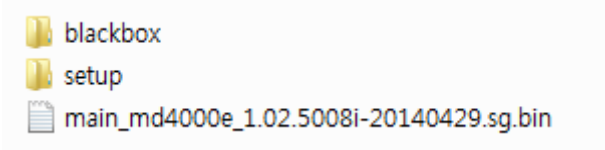
Caution: Even when the system gets restarted after formatting is performed according to the formatting menu embedded in the main body, the previous setting conditions will be maintained.

7. Updating (3)

[Manual updating]

1. The firmware update file needs to be copied into the micro SD card. (www.urive.co.kr/english)

   The micro SD card must be formatted first through the specific PC viewer or through the main body of the black box before copying the update file (main_md4000e_x.xx.xxxx_xxxxxx.bin).



2. Required to insert the micro SD card into the main body of the black box after powering off the black box.
3. Required to supply power to the black box.
4. Required to wait for about 10–20 seconds.
5. As the updating starts, the red and yellow LEDs will blink and short beeping sound will be generated.
6. When the updating process ends, the red and yellow LEDs will be turned off and, at the same time, a short beep buzzer sound will be generated. After a short while, the black box will get started again.

Caution: When the system gets restarted after the format is performed according to the formatting menu embedded in the main body, the previous setting conditions will be maintained.

8. Components

After purchasing the product, it is required to check whether all the components are included in the package.

If a component is damaged or has a problem, it is required to contact the selling shop immediately for queries.

Basic Specification

Main body stand

Front camera

Rear camera

Left/Right cameras

Continuous power cable

Video cable

(Standard 3-pole cable)

Micro SD card for URIVE

SD card reader

Basic Specification

Manual

USB WiFi dongle

GPS module

Option (To be sold separately)

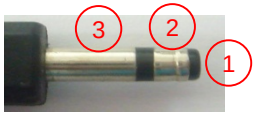
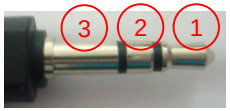
Cigar power cable

3-pole-4-pole gender conversion adapter

The components may change in their specifications arbitrarily depending on the situations of supply of parts.

(The images shown above are for the information for users, so they may look different from actual components) .

9. Socket pin arrangement

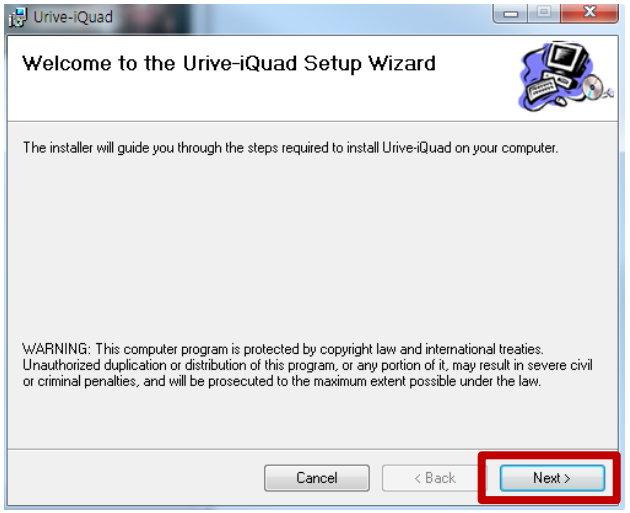
Sockets	Images of sockets	Pin arrangement
Power socket (DC socket)		① GND ② ACC ③ BAT (B+)
GPS socket (2.5 pie)		① VCC(3.6-6 V DC) ② Rx ③ GND ④ Tx (GPS Signal Output)
Video socket (2.5 pie)		① Video out ② No use ③ GND
Video socket (3.5 pie)		① Video In ② VCC (5.0 V DC) ③ Audio Line-In (No use in Left/Right camera) ④ GND

10. Precautions for installation

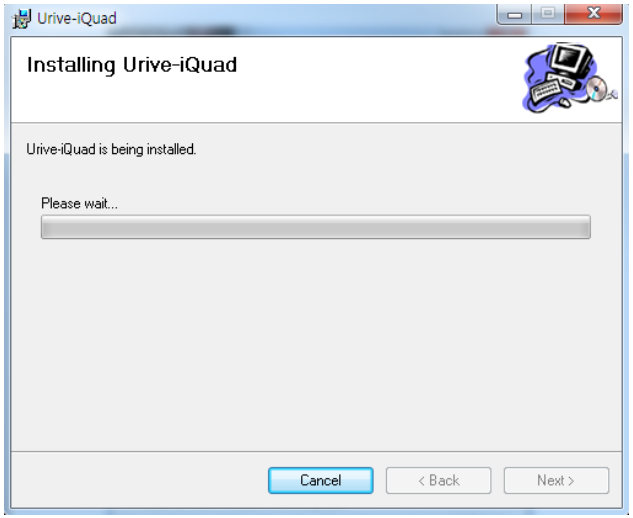
- It is recommended to install the device in an area with a flat surface. The ignition must be turned off while installing.
- As the product needs to be built inside a car, it is required to supply the power and check first whether the front and rear videos are stored normally before completing the process of building and installing it.
- When it is required to install the external camera, the camera must be connected while the power cable is not connected to the black box.
- All the components necessary for the installation are packaged inside the product box. It is required to know the installation method well and follow the procedures set while installing the system.
- Check first whether the micro SD card is inserted correctly before supplying the power.
- Take precautions not to install the product on a location that will disturb the user's view.
- It will look cleaner and it will also its enhance safety features if the cables are hidden as much as possible.
- The windshield on which the product is installed needs to be kept clean.
- Installation should be performed in a safe and bright place.
- When a rear camera is attached onto the rear window, it would be impossible to record videos with the desired quality because the window is tinted or lined with heat wires. Users need to pay attention to this when installing the black box.
- Once the system is installed, users need to remove the protective vinyl covers on the front and rear camera lens before using the system.

11. Installation of the viewer

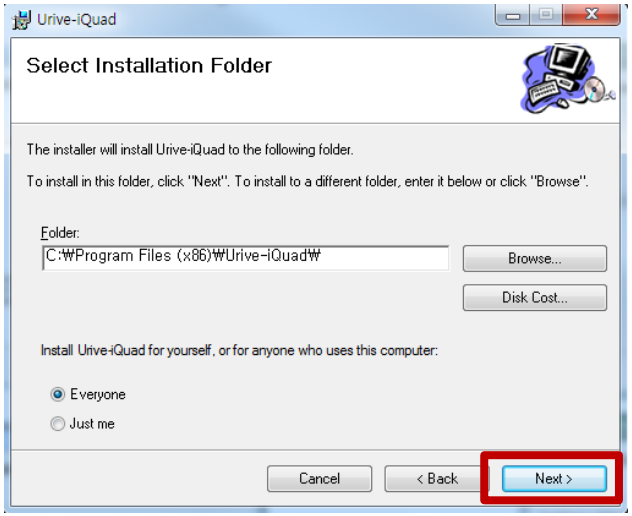
1. Execute the setup file for the specific viewer for the black box, which is stored in the micro SD card and then follow the procedure as shown below for installing the viewer.


Urive-iQuad
Welcome to the Urive-iQuad Setup Wizard
The installer will guide you through the steps required to install Urive-iQuad on your computer.
WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.
Cancel
< Back
Next >

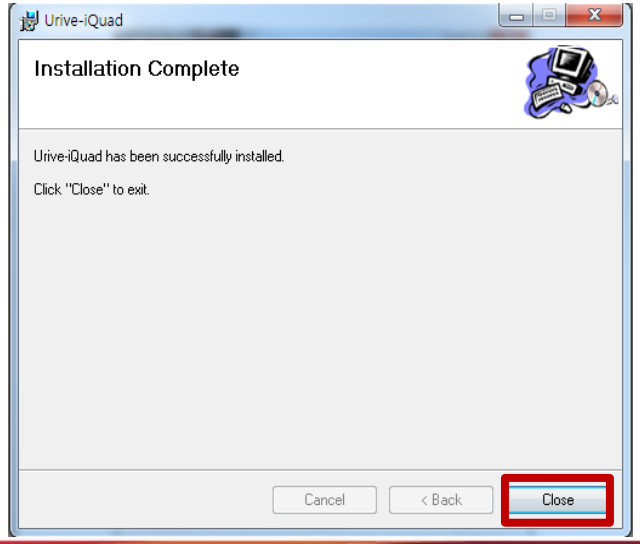
1



3


Urive-iQuad
Select Installation Folder
The installer will install Urive-iQuad to the following folder.
To install in this folder, click "Next". To install to a different folder, enter it below or click "Browse".
Folder:
C:₩Program Files (x86)₩Urive-iQuad₩
Browse...
Disk Cost...
Install Urive-iQuad for yourself, or for anyone who uses this computer:
Everyone
Just me
Cancel
< Back
Next >

2



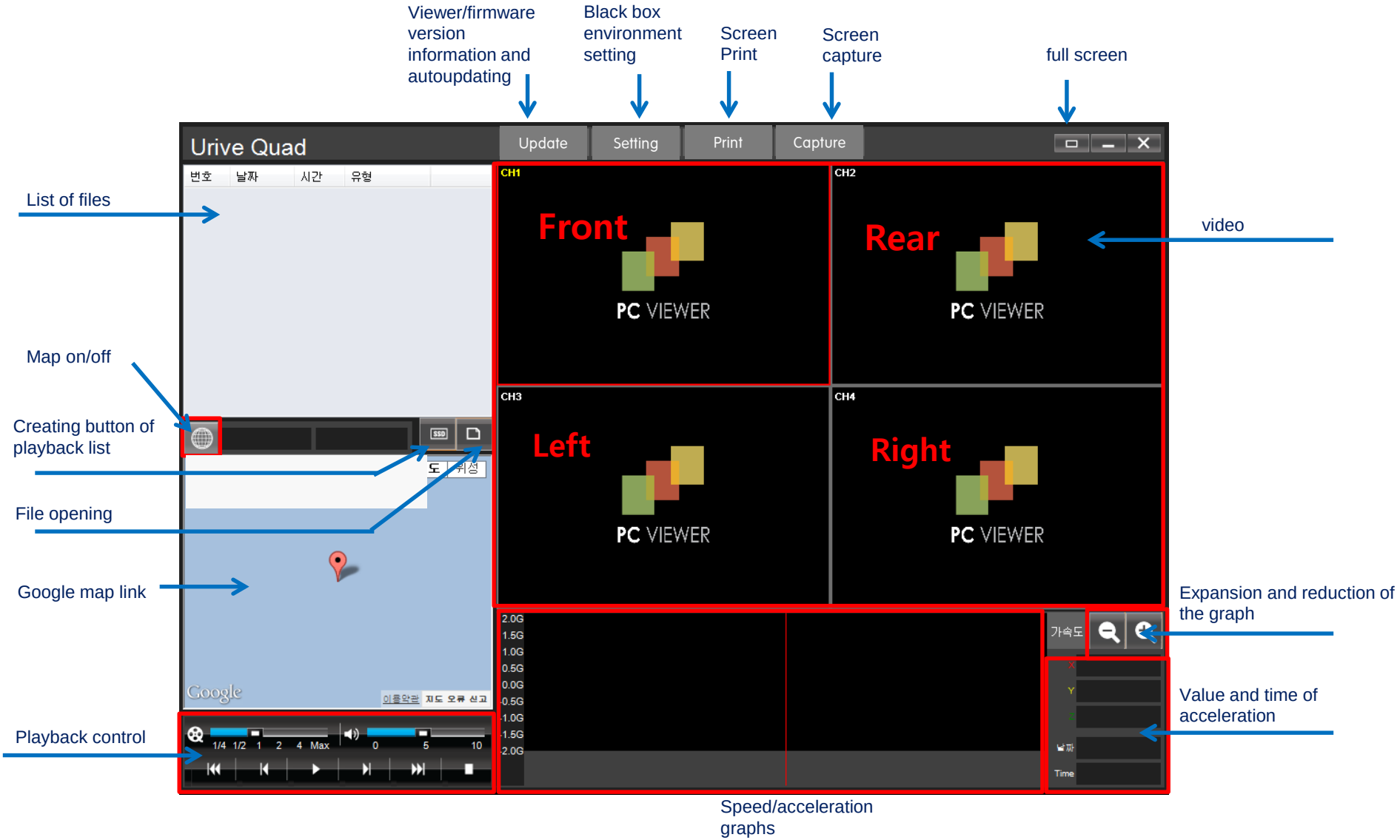
4

12. Execution and deletion of the viewer

1. Select the icon on the wallpaper of the Windows or the start menu on the Windows, and check whether “Urive_iQuad” is installed as shown below.
2. Execute “Urive iQuad”.
3. The viewer can be deleted by selecting “Urive iQuad” on the start program.

[Icon on the wallpaper]

13. Main screen of the viewer



- The information of latitude, longitude, speed and map will be displayed only when the GPS module, an optional item, is connected.
- The function for enlarging and minimizing the screen can be used by clicking the target screen, and then moving the mouse wheel button.
- **Warning:** While the specific viewer is being downloaded and executed, if the “Windows Security Warning” is displayed, users must select the “Unblock” and “Allow” buttons.

14. Buttons of the viewer (1)

1. **Update**

This provides the version information of the specific viewer and the firmware of the black box and supports the direct link to the home page's download center. The version information can be checked when the micro SD card is connected to a PC. In addition, the specific viewer and the firmware can be updated automatically.

Warning: While the specific viewer is being downloaded, if the "Windows Security Warning" is displayed, users must select the "Unblock" button.

2. **Full screen**

For shifting the selected video to the full screen.

3. **Minimize**

For minimizing the specific PC viewer to the windows task bar.

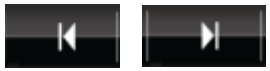
4. **End the PC viewer**

For ending the specific PC viewer.

5. **Previous/next file playback**

While a video is being played back, this will help change to the previous file or the next file and play it back.

14. Buttons of the viewer (2)

6. Move to the previous/next frame 

For moving to a video taken in the unit of every 10 seconds before or after an incident.

7. Start playback

For starting to play the selected file back from the list. Play the temporarily recorded video back again

8. Stop playback temporarily

For temporarily stopping the file that is being played back currently.

9. Stop playback

For stopping the file that is being played back currently.

10. Screen print

For printing out the selected video (Front or rear) in full scale

through a printer.

11. Screen capture

For saving the selected video (Front or rear) as a JPG file in full scale.

12. Control volume

For controlling the volume ranging from 0 to 10.

13. Playback speed control

The video can be played back at the speed of the 1/4, 1/2, 1, 2 or 4-times playback rate.

14. Buttons of the viewer (3)

14. Acceleration/Speed graphs Speed acceleration

The toggle buttons individually show the acceleration and speed graphs. The speed graph can be displayed only when the GPS module, an optional item, is installed.

16. Black box environment setting Setting

For storing the set environment of the black box in the micro SD card. The setting can be performed after the micro SD card is connected to a computer.

17. Map on/off

For displaying the driving location information on a map while a video is being played back. This function can be supported only when the GPS, an optional item, is installed.

18. Creating Playback list

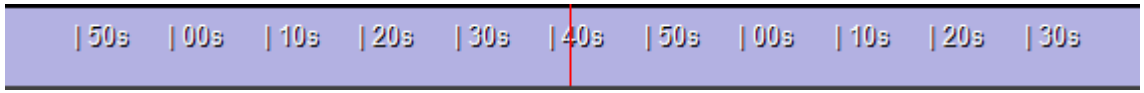
For retrieving all files or a list of files that are sorted out according to their types, in order to play the data back that are stored in the micro SD card.

19. Open file

Search a recording file to play.

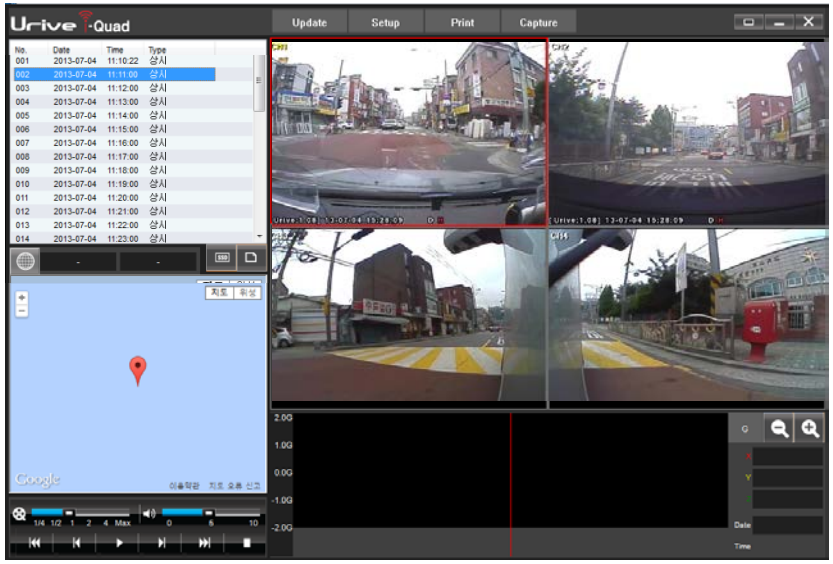
19. Zoom In/Out of Time bar

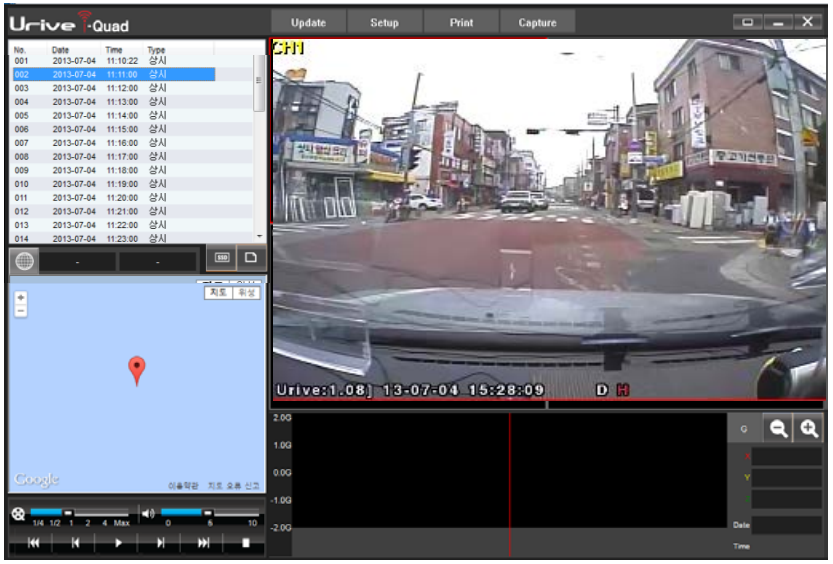
Extend and reduce the below time bar using buttons.



15. Full screen view

◆ For viewing a video in full screen while it is being played back, it is required to do a double-click the specific screen.

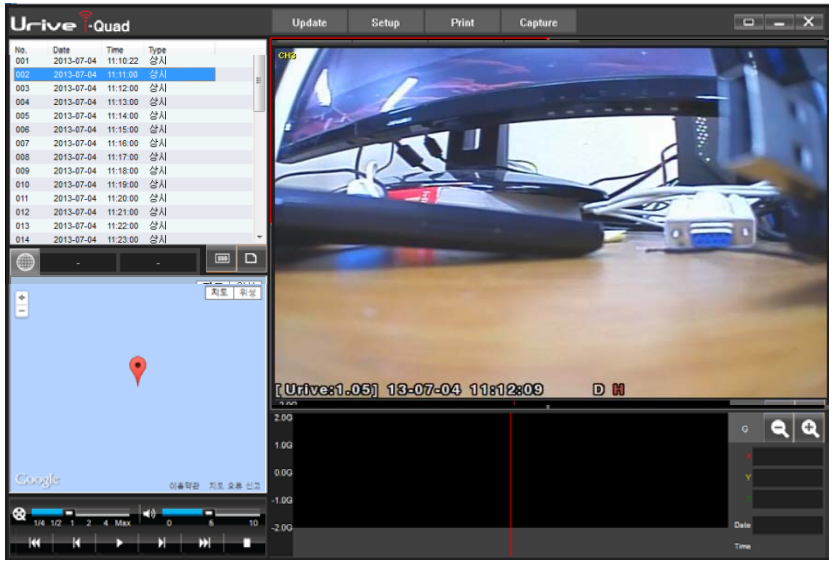




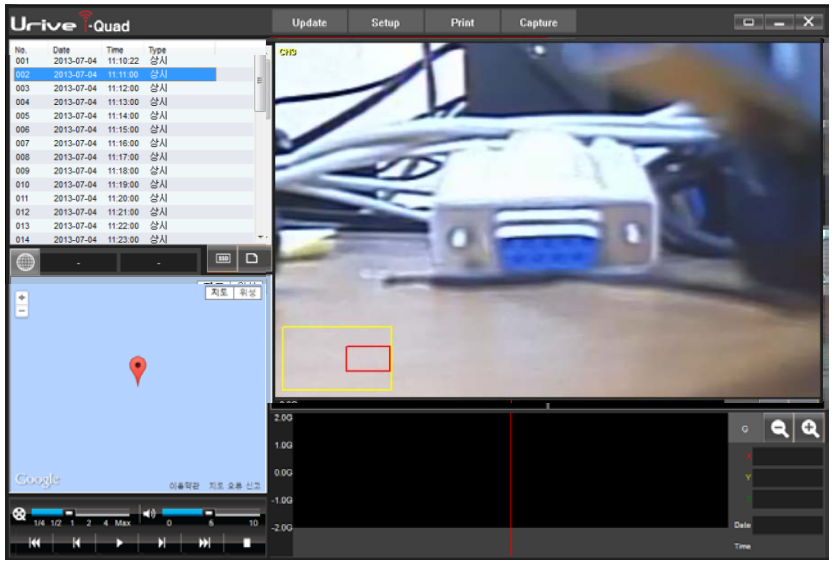
1. Full screen mode: Double click of the specific channel will shift the specific camera video to a full screen video.
2. Quad screen mode: Double click of the screen will shift the four camera videos to a full screen video.

16. Digital zooming

◆ Clicking the screen while a video is being played back will bring up a red-colored digital zooming box at the bottom left of the screen



[Before digitally zoomed]

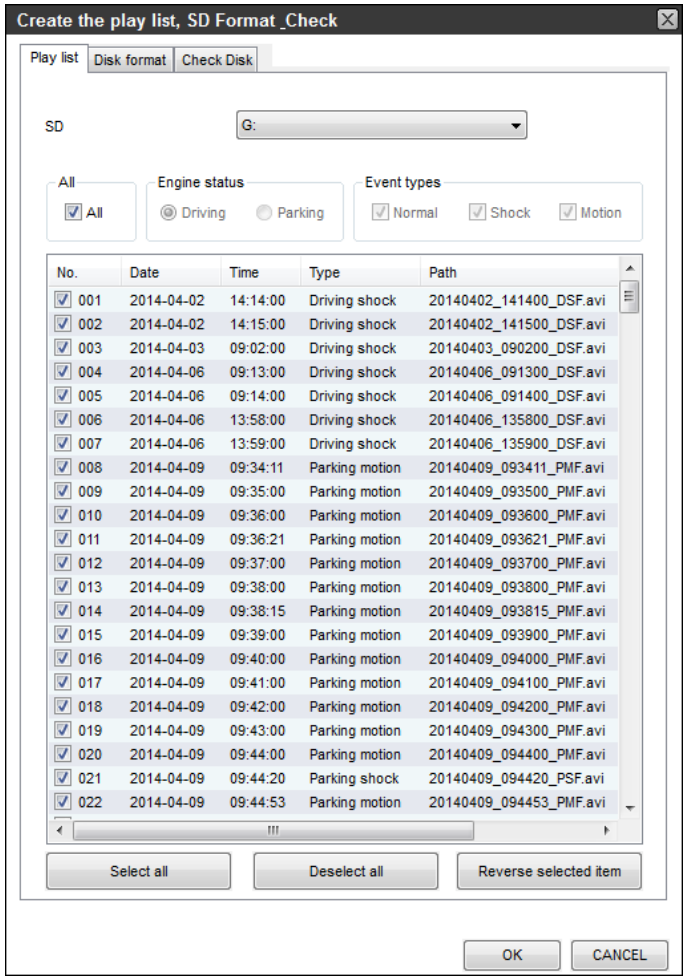


[When digitally zoomed]

1. Shift the specific camera video to a full screen video.
2. Clicking the screen will bring up a red-colored digital zooming box.
3. Scrolling the mouse wheel forwards or backwards will enlarge or reduce the screen.
4. Moving the mouse while clicking it on the screen will move the box onto the target part of the screen.

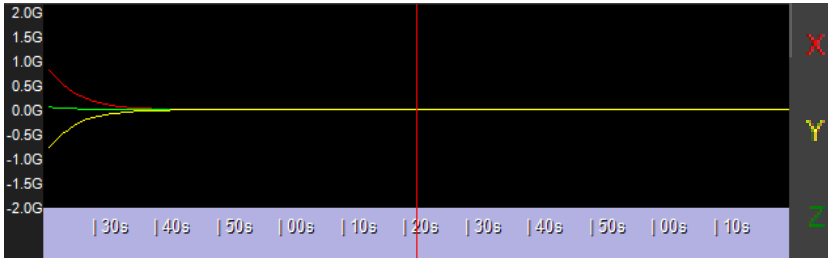
17. Playback of the recorded data

◆ When it comes to the video data that are stored in the micro SD card of the black box, all of the data or the data that are sorted out based on types can be selected and played back. It is also possible to format, recover and test micro SD card.



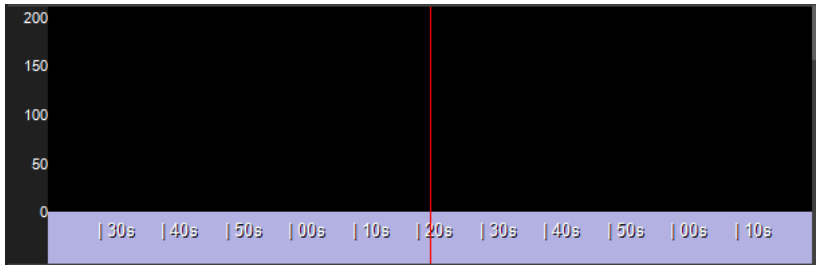
1. Take out the micro SD card that is inserted in the black box, and connect it to a computer.
2. Select the SD button on the viewer's main screen. Then, as shown in the figure on the left, all the black box data included in the micro SD card will be searched before they are displayed through the playback list tab.
3. Playback list: For selecting the location and type of a video.
4. SD: For changing the location of the micro SD card that stores videos.
5. All, Engine status, Event types: For selecting the type of a video that the user wants to play again, and playing back the selected video.
6. Check all, Uncheck all and Reverse checked items: For checking and un-checking the files from the list and also for reversing the state of the checked items
7. Confirm: Playing back after bringing the selected data on the list to the file list window of the main screen.
8. Cancel: For ending the playback list generation window and the SD formatting window.

18. Viewing of the information of the recorded file



[Gravitational acceleration graphs]

◈ While a video is being played back, it is possible to see the three-axis gravitational acceleration graphs as shown in the figure on the left. The three-axial directions include the front-rear direction, the left-right direction and the up-down direction.



[Speed graph]

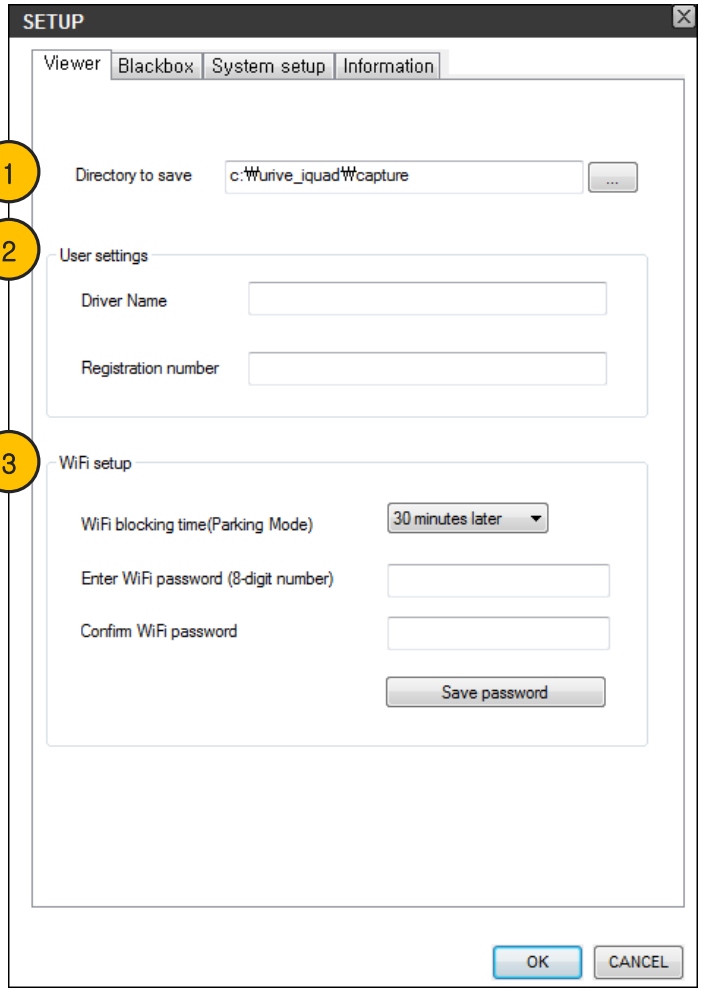
◈ While a video is being played back, it is possible to see the driving speed graph or the speed. This can be displayed only when the GPS module, an optional item, is installed.

[Latitude/Longitude/Playback time]

◈ While a video is being played back, it is possible to see the information related to the latitude, the longitude and the playback time as shown in the figure on the left. This can be displayed only when the GPS module, an optional item, is installed.

19. Black box environment setting (1)

◆ **Black box environment setting**: Pushing the button on the specific viewer's main screen will open up the black box environment setting window as shown below. The window shows the tabs for Urive iQuad viewer setting/Environment setting/Time setting/Audio and video setting/Version information. It is required to connect the SD card to a computer before running this function.

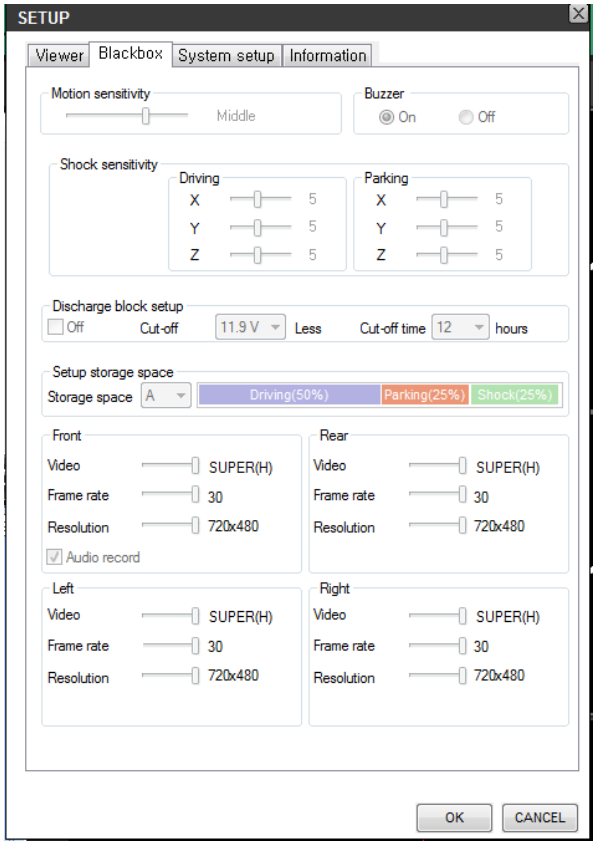


1. Snapshot saving path: For designating the path for the front and rear view image.

2. User setting: For entering the driver's information and the car number. It would be helpful if individual drivers use their own memory cards separately.

3. Wi-Fi setup: For setting the Wi-Fi blocking time in parking mode and initializing the Wi-Fi password.

19. Black box environment setting (2)



[Environment setting]

1. Parking mode motion sensitivity: For adjusting the sensitivity of the sensor that detects a motion (while parked). It is possible to choose among the four levels: high, medium, low, and no use.

2. Shock detection sensitivity: For adjusting the sensitivity of the sensor that detects shock. The higher the value becomes, the lower the sensitivity gets, and vice versa (Select: Stages 1-10)

3. Auto cutoff voltage setting: For setting the cutoff voltage and the cutoff time. The cutoff will take place when one of the two conditions is met. There are four stages of the cutoff reference voltage that can be selected, 11.5 V, 11.7 V, 11.9 V, and 12.1 V.
   There are five stages of the cutoff time can be selected from: None, 6, 12, 24, and 48 hours. It is just required to set one of the setting conditions for each operation.

4. Disk storage space setting: For deciding the disk space usage.
   A : 50% for driving, 25% for parking, 25% for events (default)
   B : 25% for driving, 50% for parking, 25% for events
   C : 75% for driving, 25% for events

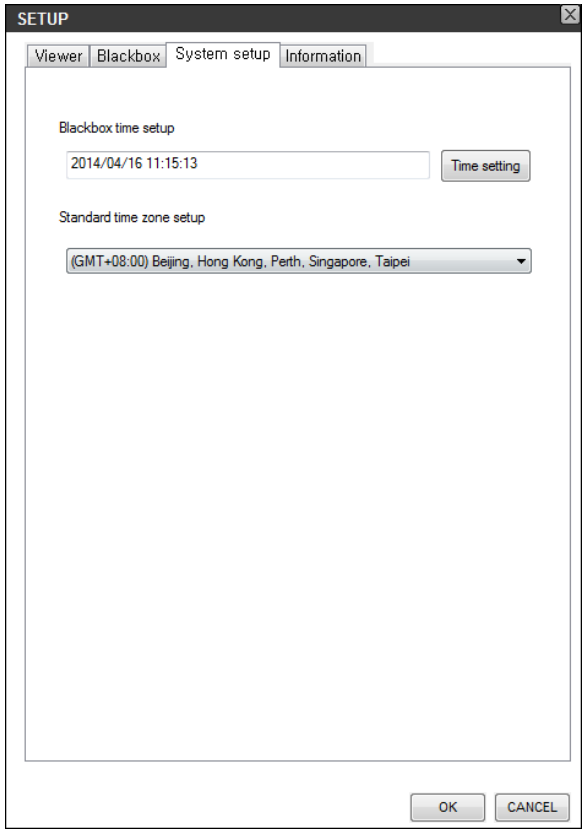
5. Video Quality: For setting the quality of the front, rear, left and right channel. There are 3 stages: normal, high, very high

6. Framelate: For setting the framelate of the front, rear, left and right channel. There are 7 stages: 1/5/10/15/20/25/30.

7. Resolution: For setting the resolution of the front, rear, left and right channel. There are 2 stages: 360x240, 720x480.

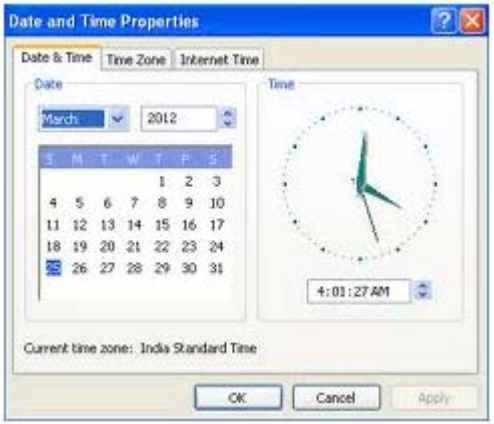
8. Audio recording: For saving the audio of the front channel. It could be set an audio On/Off.

19. Black box environment setting (3)



[Time setting]

1. It is possible to set the black box time and the standard time by selecting the time setting tab.
2. Black box time setting: If there is no GPS module in the product, it will be impossible to set the black box time. It is required to insert the micro SD card into the black box unit immediately and supply power to it after setting the time in order to minimize the difference between the set time and the current time.
3. Standard time setting: For setting the GMT time for individual countries. The default will set as the time read from the PC (Singapore standard time – GMT +09:00 Singapore)
4. Pushing the Ok button when completing the selection process will complete the environment setting process.

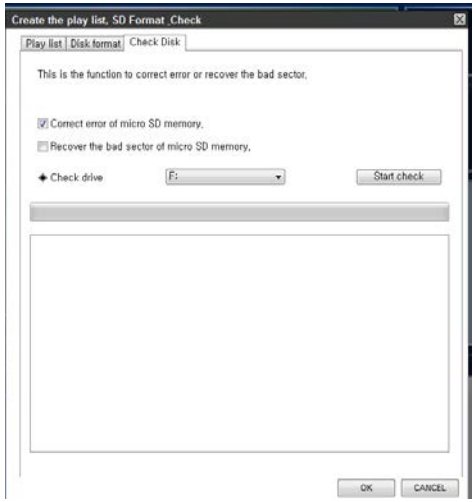


Tip: It will help reduce the difference between the black box time and the current time if the user changes the time through the [Date and Time Information] menu and then insert the SD card into the black box.

20. Checking and recovery of the SD card

◆ Checking and recovery of the SD card: This process is for correcting errors that the SD card has or finding and recovering faulty sectors. If other applications are accessing the SD card, they should be ended before continuing this process.

1

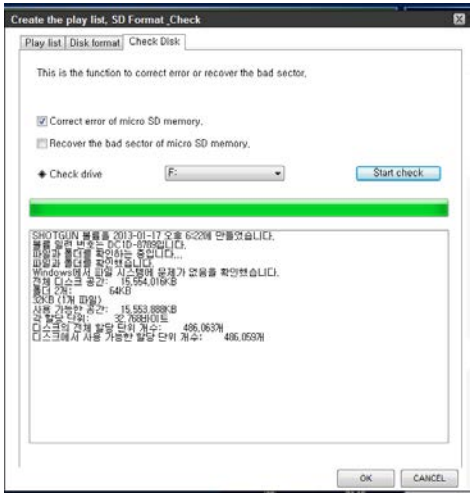


[SD checking and recovery basic screen]

1. Take out the micro SD card that is inserted in the black box and connect it to a computer.
2. Selecting the

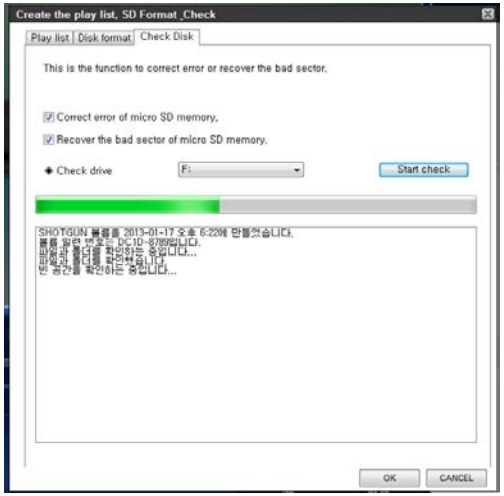
button on the viewer's main screen will bring up the SD card checking and recovery tab, which will help check and recover the SD card as shown in Figure (1).
3. Checking the micro SD card will help detect basic errors of a memory card, and also help correct errors, detect and recover faulty sectors.
4. The Figures (2) and (3) show the test results of checking the memory card.

2



[Normal SD card test results 1]

3



[Normal SD card test results 2]

21. Preparations for using the WiFi function

The Wi-Fi function will be automatically turned on when the black box is booted up if the mini USB Wi-Fi dongle is connected.

1. Connect the mini USB Wi-Fi dongle to the main body.
2. When the mini USB Wi-Fi dongle's green LED blinks, it means that the system is operating normally.

[Parking mode]

1. When driving mode is set to parking mode, the Wi-Fi dongle connection will be turned on during the setting time.
2. The default is for 30 minutes. It is possible to set time for 4 stages in the viewer.
3. If you want to connect the mini USB Wi-Fi dongle on parking mode, follow the below steps.
    - Push the mode button for 3 minutes and then the buzzer will sound.
    - Continuously push the mode button for 2 minutes more. When the second buzzer sound, the Wi-Fi dongle connection will be turned on.
    - Caution) If you push the mode button for 10 minutes, SD card will be format.

※ It doesn't offer on/off function of parking mode on Continuous recording mode.

22. Download and installation of Mobile application

[For Android phones]

1. Execute “Play Store” icon from the smartphone.
2. Search “Urive” or “i-Quad” through the search window.
3. Or take a picture of the QR code on the right to download the i-Shotgun app.

[For iPhones]

1. Execute “App store” icon from the smartphone.
2. Search “urive” or “i-quad” through the search window.

※ Check the Urive home page for more details about i-Quad app manual.
(www.urive.co.kr Urive download center >> i-Quad)

Precautions:
- Downloading can take place only for smartphones based on the Android OS.
- Impossible to have simultaneous accesses for the link with the black box.
- While the black box is linked, the use of Internet is restricted.
- Video playback or some functions may not work well in some types of smartphones. .
- The connection distance may vary depending on the environment and communication related to using the system.

23. Stored data

1. **Black box folder**: For storing data. Individual video files will be stored at every 1 minute continuously.
   - File name: YYYYMMDD_hhmmss_[engine][event][channel].avi
   - Engine
     - [D]: Driving. The video file that was stored during driving.
     - [P]: Parking. The video file that was stored during parked.
   - Event
     - [N]: Normal. A video will be stored continuously while driving at every 1 minute.
     - [M]: Motion. As recognizing the motion while parked, A video will be stored from 10 seconds before the motion to the 20 seconds after it.
     - [S]: Shock. A video will be stored by recognizing shocks while driving or parking.
       - Driving mode: In time of an event, the continuous recording video file will be converted to the shock file at every 1 minute.
       - Parking mode: A video file of the incident, taken for 30 seconds starting from 10 seconds before the incident to 20 seconds after it, will be stored.

         ※ When the usable memory is exceeded, the oldest file will be deleted before the storing process continues.
   - Channel
     - [F]: The front camera
     - [B]: The rear camera
     - [L]: The left camera
     - [R]: The right camera

   File generation Ex.)

   Blackbox\14\04\09\10\ 20140409_100200_DNF : A video generated from the front camera at 10:02:00-10:02:59 on April 9th in 2014.

   Blackbox\14\04\09\10\ 20140409_100230_DSB : A video generated because of a motion monitored while driving from the rear camera at 10:02:00-10:02:59 on April 9th in 2014.

   Blackbox\14\04\09\10\ 20140409_100230_PMF : A video generated because of a motion monitored while parked from the front camera at 10:02:20-10:02:50 on April 9th in2014.

   Blackbox\14\04\09\10\ 20140409_100230_PSB : A video generated because of a motion monitored while parked from the rear camera at 10:02:20-10:02:50 on April 9th in 2014.
   - Log file: for storing various system logs, shock levels, events, and hourly GPS-based positions.

   File generation Ex.) Blackbox\14\04\09\10\ log.txt : A system information file generated at 10:00:00-10:59:59 on April 9th in 2014.

2. **Setup folder:** For the user setting.

3. **UriveiQuad.msi**: A file for installing the specific PC viewer. It is possible to download it from the home page of Urive

24. Storage ratio of the memory card by memory

[Table 1] Storage assignment for each recording mode by type and memory

Unit: MB

Type	Memory (GB)	Memory (MB)	Continuous	Parking	Driving event
A	16	16384	7782	3891	3891
	32	32768	15564	7782	7782
	64	65536	31129	15564	15564
	128	131072	62259	31129	31129
B	16	16384	3891	7782	3891
	32	32768	7782	15564	7782
	64	65536	15564	31129	15564
	128	131072	31129	62259	31129
C	16	16384	11673	0	3891
	32	32768	23347	0	7782
	64	65536	46694	0	15564
	128	131072	93388	0	31129

[Table 2] Storage assignment ratio for each recording mode by type

Unit: %

Type	Continuous	Parking	Driving event
A	50%	25%	25%
B	25%	50%	25%
C	75%	0%	25%

25. Standards of the product

- Size: 105 x 107 x 22 mm (Main body)
- Memory: 32GB micro SDHC card class 10 exclusively
  (Up to 128GB can be supported / MLC type micro SDHC card class 10 is recommended)
- Recording: Continuous recording, event recording and recording of monitored events while parked
- Front camera: VGA CMOS 720x480
- Rear camera: VGA CMOS 720x480
- Left/Right camera: VGA CMOS 720x480
- Frames that can be stored: Driving mode – Max. 120 fps[30fps/CH] /Parking mode – Max. 80 fps [20fps/CH]
- Resolution of stored videos: Driving mode – 720x480 [front, rear, left, right]
  Parking mode – 720x480 [front, rear, left, right]
- Audio: Embedded microphone in the front camera
- Video output: Stereo jack (3-pole)
- Acceleration sensor: 3-axis acceleration sensor
- G P S: SIRF-III class
- Working voltage: DC 12 V / 24 V will be supported.
- Power consumption: Max. 7.2W (When the monitor, the GPS module and the rear camera are connected all)
- Working temperature: -20℃ to 70℃
- Keeping temperature: -40℃ to 85℃
- OS that can support the viewer: Windows XP or higher version

※ The exterior and specification of the product may change without any notice in advance for the purpose of improving the product .

26. Before requesting A/S services

Users should back up (Separate saving) periodically important data saved in a product that provides storage function. It would be necessary to delete the data in the storage unit inevitably depending on cases. In relation to that, all the data stored in the storage device may be deleted while providing A/S services. Considering that, users must back up all the important data before requesting A/S services.

When it comes to the products that are submitted to the customer center for A/S services, the company will think that their data are backed up by the users themselves, and will not back up any data separately. Considering that, users should understand that the company will not be held responsible for any loss of data accordingly.

When users use a package delivery service, there is a risk of shock or damage. Considering that, users should package the product in a way that will not expose it to impact. Users are recommended to write down their names, addresses, contacts and contents of failures, which will help us facilitate the repairing process.

27. Problem analysis before A/S services

Symptoms	Measures
The time of the black box not correct.	When there is no GPS module, it is required to select the black box setting menu on the specific viewer in order to set the time through the time setting menu.
Power not turned on	Check the power on/off switch.
	Check whether the continuous power cable is connected correctly. (Black: Ground/Red: B+/Yellow: ACC power)
No GPS information received	Check the connection between the black box and the GPS socket.
No buzzer sound heard	Check whether the buzzer sound is applied or not by selecting the audio/video setting menu on the black box setting menu of the specific viewer.
No audio recorded	Check whether the audio recording is applied or not by selecting the audio/video setting menu on the black box setting menu of the specific viewer.